II. CONSERVATION OF BIOLOGICAL DIVERSITY

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NEW DATA ON RARE SPECIES *DIGITALIS LANATA* EHRH. (SCROPHULARIACEAE) IN THE REPUBLIC OF MOLDOVA

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Abstract: The description of extant wild population of *Digitalis lanata* Ehrh. in the vicinity of vill. Nimoreni, Ialoveni distr. (N 47° 00' 03", E 28° 39' 38"), some morphometric parameters, density of individuals and the attempts of *ex-situ* propagation with the aim of reintroduction into the natural biotope is presented.

Key words: *Digitalis lanata*, flora, “Carbuna” landscape reserve, Republic of Moldova

In the times of scientific and technological progress and intensive use of natural resources, anthropogenic impact on the biosphere reaches alarming proportions. Some ecosystems that occupied previously significant spaces, almost completely disappeared, lost their integrity or are incomplete. Alteration or destruction of natural habitats and plant communities narrow the possibility of surviving and spreading of plant species. In the process of ever-increasing anthropogenic impact on natural habitats increases the danger and threat on species found in nature in small numbers or in very limited territories. In the complex of problems of environmental protection, protection of flora plays a special role. Autotrophic plants as primary creators of organic matter occupy an exceptional, nodal position among other components of the biosphere.

The strategic objective of protection and conservation of biodiversity, effective protection of rare and endangered plant species, which has become international, should be resolved taking into account a set of measures to study the state of natural existing populations, reproduction of individuals in *ex-situ* conditions, followed by reintroduction into natural habitats.

The aim of this work is to investigate the state of existing natural population of Critically Endangered [2] vascular plant in the Republic of Moldova – *Digitalis lanata*

Ehrh. The study was conducted during 2018-2020. The chorological features, *ex-situ* growth peculiarities, size and structure of existing population of the species were registered (Figure 1).

In the Republic of Moldova *D. lanata* was registered and collected in the past (by C. Zahariadi, 1929-1934 (Zloți),

Figure 1. *Digitalis lanata* Ehrh. in *ex-situ* collection

V. Andreev, 1957 (Zloți) and K. Vitko, L. Nikolaeva, 1983) [2, 3], howether recently a quite undisturbed and viable population was encountered in the vicinity of vill. Nimoreni, Ialoveni distr. (N 47° 00' 03", E 28° 39' 38"). The area of this population is cca 0,25 ha, density of individuals vary from 1 to 3 mature and 2-10 juvenile individuals per square meter. The surface area represents a glade on the steppic slope of northern exposition with the steepness of 30-35° surrounded with the *Robinia pseudoacacia* L. stands. The dominant component of *Festuceto-Poaetum* (*P. angustifolia*) *herbosum* plant community is – *Festuca valesiaca* Gaudin, *Poa angustifolia* L., *Agrimonia procera* Wallr., *Achillea setacea* Waldst. et Kit., *Achillea pannonica* Scheele, *Achillea collina* J.Beck. ex Reichenb., *Odontites vulgaris* Moench, *Melilotus officinalis* (L.) Pall., *Astragalus glycyphyllos* L., *Medicago falcata* L., *Origanum vulgare* L., *Melica transsilvanica* Schur etc. Due to the nearby location of the village, the ruderal element is represented by the following species: *Erigeron annuus* (L.) Pers., *Trifolium arvense* L., *Artemisia absinthium* L., *Cynodon dactylon* (L.) Pers., *Xeranthemum annuum* L. etc.

In recent years, National Botanical Garden (Chisinau) has been actively involved in various programs for the *ex-situ* conservation and reintroduction *in-situ* of threatened with extinction plant species [1]. Successful *ex-situ* reproduction of *D. lanata* takes place with the aim of reintroduction into a natural biotope. One of these locations is former known growing site – "Cărbuna" Landscape reserve, on the territory of which we are planning to restore the population of *D. lanata*.

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BIBLIOGRAPHY

1. Ciocarlan N. *Ex-situ* conservation of rare medicinal plants in the Botanical Garden (Institute) of Academy of Sciences of Moldova. In: Acta Horti Botanici Bucurestiensis, 2013, vol. 40, Issue 1, p. 43-48.
2. Izverscaia T., Ciocârlan N. *Digitalis lanata* Ehrh. /The Red Book of the Republic of Moldova. 3rd ed., Ch.: Știința, 2015, p. 108.
3. Vitko K., Nikolaeva L. Novye v SSSR mestonahozhdeniya naperstjanki šerstistoj – *Digitalis lanata* Ehrh. (Scrophulariaceae). In: Izvestija AN MSSR. Ser. biolog. i him. nauk, 1985, nt. 2, p. 55-56. [in russian]